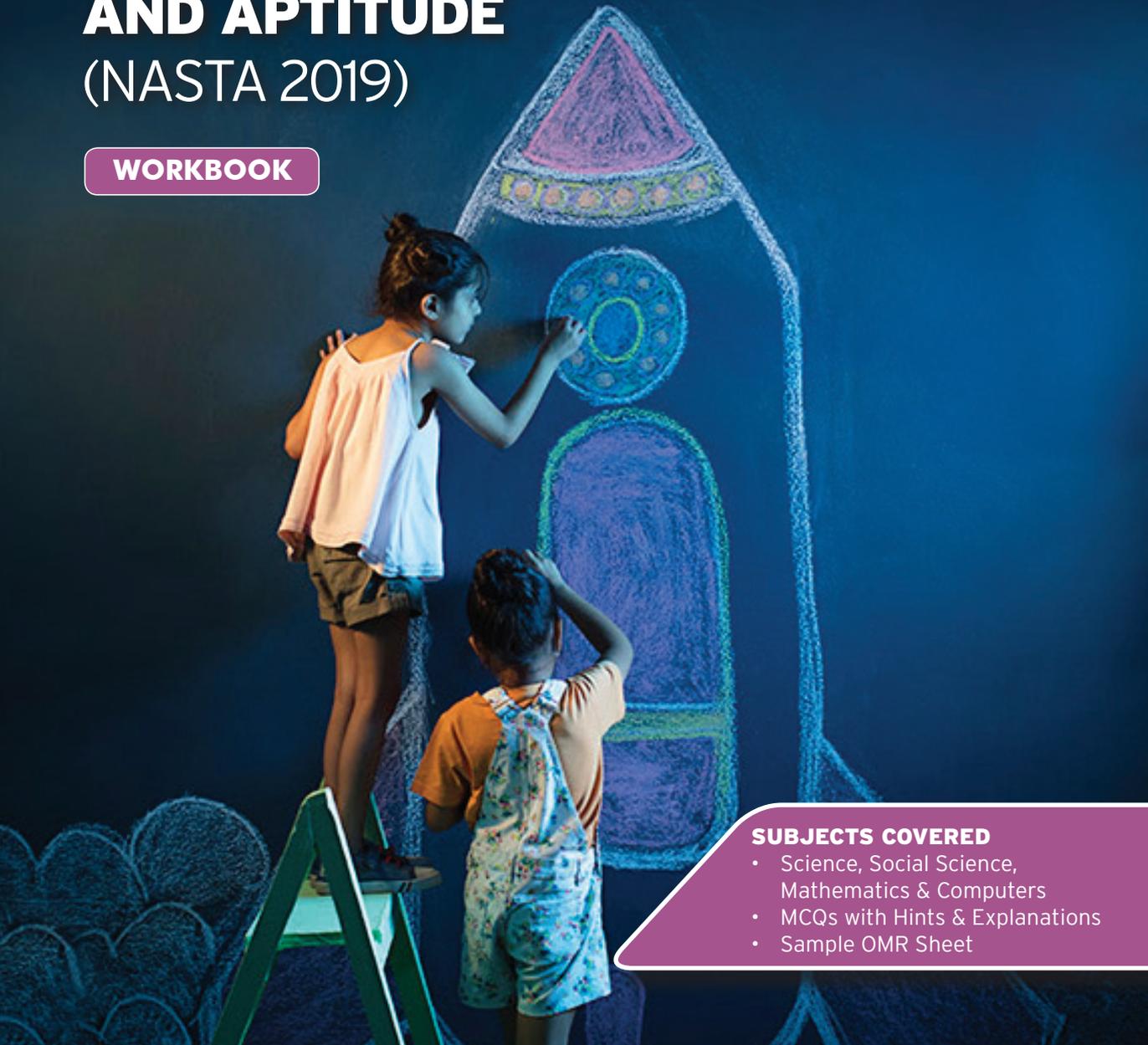# kamp
KNOWLEDGE & AWARENESS
MAPPING PLATFORM

NATIONAL ASSESSMENT FOR SCIENTIFIC TEMPERAMENT AND APTITUDE
(NASTA 2019)

WORKBOOK

SUBJECTS COVERED
- Science, Social Science, Mathematics & Computers
- MCQs with Hints & Explanations
- Sample OMR Sheet

UNLOCK THE HIDDEN SCIENTIST IN YOUR CHILD WITH KAMP

WHY SCIENTIFIC TEMPERAMENT IS IMPORTANT FOR YOUR CHILD?

Scientific temperament refers to an individual's attitude of logical and rational thinking. An individual is considered to have scientific temper if s/he employs a scientific method of decision-making in everyday life. The term was first coined by India's first Prime Minister, Jawaharlal Nehru, in his book 'The Discovery of India'.

"A Statement on Scientific Temper" prepared by a group of scholars and issued on behalf of the Nehru Centre, Bombay, in July 1981, mentions that "Scientific Temper involves the acceptance, amongst others, on the following premises:

1. The method of science provides a viable method of acquiring knowledge;

2. The human problems can be understood and solved in terms of knowledge gained through the application of the method of science;

3. The fullest use of the method of science in everyday life and in every aspect of human endeavour from ethics to politics and economics is essential for ensuring human survival and progress; and

4. That one should accept knowledge gained through the application of the method of science as the closest approximation of truth at that time and question what is incompatible with such knowledge; and that one should from time to time re-examine the basic foundations of contemporary knowledge."

NATIONAL ASSESSMENT FOR SCIENTIFIC TEMPERAMENT AND APTITUDE (NASTA)

National Assessment for Scientific Temperament and Aptitude (NASTA) is designed and developed for the elementary to middle school students. It is an Attribute Based assessment as against only Subject Based Assessment.

NASTA ASSESSMENT PARAMETERS

PARAMETERS	CONTEXT
Observation and Precision	Students need to be able to develop the most basic skill in science done by using our five senses in surrounding environment. After making observations it is important to group objects according to a purpose. Measuring is important in collecting, comparing, and interpreting data.
Imagination, Creativity and Innovation	Students need to be able to think and work creatively in both digital and non-digital environments to develop unique and useful solutions.
Critical Thinking and Problem Solving	Students need the ability to think critically, which includes proficiency with comparing, contrasting, evaluating, synthesizing, and applying without instruction or supervision.
	Students need the ability to solve complex problems in real time.
Prediction and Interpretation	Students should be able to predict and interpret situation, events, findings based on multiple observations.
	An inference is a link between what is observed and what is already known.
	Whereas, prediction is an educated guess based on good observations and inferences about an observed event or prior knowledge.
Communication and Collaboration	Students must possess the ability to collaborate seamlessly in both physical and virtual spaces, with real and virtual partners globally.
	Students must be able to communicate not just with text or speech, but in multiple multimedia formats. They must be able to communicate visually through video and imagery as effectively as they do with text and speech.
Social Skills and Empathy	This includes adaptability, fiscal responsibility, personal accountability, environmental awareness, empathy, tolerance, and global awareness.

IMPORTANCE OF ASSESSMENT PARAMETERS

PARAMETERS	DEFINITION AND IMPORTANCE
Observation and Precision	Scientific observation is the central element of scientific method or process. One of the core skills of a science enthusiast is to make observation. Precision and accuracy are two important factors during the course of scientific measurements. Precision is how consistent results are when measurements are repeated.
Imagination, Creativity and Innovation	Imagination is about seeing the impossible, or unreal. Creativity is using imagination to unleash the potential of existing ideas in order to create and valuable ones. Innovation is taking existing, reliable systems and ideas and improving them. These skills serve as an important backbone while solving problems.
Critical Thinking and Problem Solving	Critical thinking and problem solving refer to the ability to use knowledge, facts, and data to effectively solve problems. Scientific scenarios require one to assess the environment, analyze a situation, design a solution, and ultimately win in a competitive scenario. Both critical thinking and creative thinking serve as important pillars for design thinking.
Prediction and Interpretation	A prediction, or forecast, is a statement about a future event. A prediction is often, but not always, based upon experience or knowledge. Interpretation on the other hand is the act of explaining, reframing, or otherwise showing your own understanding of something. Scientific skillsets require honing of both predictability and interpretability skills to extrapolate findings or provide plausible reasons for an observation.
Communication and Collaboration	Collaboration and communication are interpersonal skills that help people work well with one another. These skills involve being able to read the vast number of verbal and nonverbal cues that we all use to communicate our ideas and emotions. In today's working environment, it is important that we proactively share ideas and knowledge to solve the complex and challenging problems that we encounter.
Social Skills and Empathy	Empathy and social skills allow us to function cohesively. We are continuously working towards examining and improving our world. While doing so, we end up judging or critically evaluating others. Empathy and social skills help us to be open-minded and develop a balance between self-confidence and understanding different perspectives.

CONTENTS

KNOWLEDGE & AWARENESS MAPPING PLATFORM
OMR ANSWER SHEET - NASTA 2019

Use HB PENCIL / BALL POINT PEN (BLUE / BLACK) to write and darken the circles.

CORRECT METHOD / सही तरीका ●   WRONG METHODS / गलत तरीके ⊗ ∅ ⊙ ◑

SCHOOL

KULDEEP INTERNATIONAL

PARTICIPANT'S NAME

AMIT

100001

CLASS	SCHOOL CODE	Roll No.	ENROLLMENT NO.
5	**10672 - Paper-1**	**19100001**	**1910015947**

MARK YOUR ANSWERS WITH HB PENCIL / BALL POINT PEN (BLUE / BLACK)

Qno.	A	B	C	D	Qno.	A	B	C	D	Qno.	A	B	C	D	Qno.	A	B	C	D
1	○	○	○	○	16	○	○	○	○	31	○	○	○	○	46	○	○	○	○
2	○	○	○	○	17	○	○	○	○	32	○	○	○	○	47	○	○	○	○
3	○	○	○	○	18	○	○	○	○	33	○	○	○	○	48	○	○	○	○
4	○	○	○	○	19	○	○	○	○	34	○	○	○	○	49	○	○	○	○
5	○	○	○	○	20	○	○	○	○	35	○	○	○	○	50	○	○	○	○
6	○	○	○	○	21	○	○	○	○	36	○	○	○	○	51	○	○	○	○
7	○	○	○	○	22	○	○	○	○	37	○	○	○	○	52	○	○	○	○
8	○	○	○	○	23	○	○	○	○	38	○	○	○	○	53	○	○	○	○
9	○	○	○	○	24	○	○	○	○	39	○	○	○	○	54	○	○	○	○
10	○	○	○	○	25	○	○	○	○	40	○	○	○	○	55	○	○	○	○
11	○	○	○	○	26	○	○	○	○	41	○	○	○	○	56	○	○	○	○
12	○	○	○	○	27	○	○	○	○	42	○	○	○	○	57	○	○	○	○
13	○	○	○	○	28	○	○	○	○	43	○	○	○	○	58	○	○	○	○
14	○	○	○	○	29	○	○	○	○	44	○	○	○	○	59	○	○	○	○
15	○	○	○	○	30	○	○	○	○	45	○	○	⊙	○	60	○	○	○	○

FILL UP THE CONTACT DETAILS BELOW

MOTHER'S / FATHER'S NAME

EMAIL ID

MOBILE NO. + | 9 | 1 | | | | | | | | | |

DATE OF EXAMINATION

D D - M M - Y Y Y Y

SIGN OF THE PARTICIPANT
TO BE SIGNED BY STUDENT ONLY

SIGNATURE OF THE INVIGILATOR

1. **Sameera and Sam have same parents. What is the relationship between Sameera and Sam?**
   [A] They both are real brother and sister
   [B] They both are cousins
   [C] Sameera is Sam's niece
   [D] None of these

2. **Based on the following flow chart which gives the techniques, a student adopted to separate the constituents of a mixture.**

   Mixture →(Filtration) P →(Distillation) Water
   ↓ Q   ↓ R
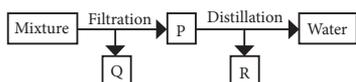
   What could substance Q be?
   [A] Sugar
   [B] Chalk powder
   [C] Alcohol
   [D] Oxygen

3. **Which of the following mixtures can be separated by using a filter paper?**
   [A] Vinegar
   [B] Saltwater
   [C] Sand and water
   [D] Sugarwater

4. **Which of the following mixtures could not be separated into its components by decanting?**
   [A] Beans in hot water
   [B] Sand in water
   [C] Oil in water
   [D] Coffee in hot water

5. **While rinsing rice in the kitchen with water, before cooking, which process is used generally to separate rice from water?**
   [A] Decantation
   [B] Filtration
   [C] Winnowing
   [D] Evaporation

6. **Difference in _____, is utilizes in the process of winnowing for the separation of two solids.**
   [A] Shape   [B] Size
   [C] Weight   [D] Colour

7. **Riya's teacher asked her to identify the animal which moves with just one large, disc-shaped muscular foot. Which out of the following should Riya choose?**
   [A] Tortoise   [B] Snail
   [C] Earthworm   [D] Cockroach

8. **A bone which has round head and fits into cup like depression of another bone is called_____**
   [A] Ball & Socket joint   [B] Hinge Joint
   [C] Pivot Joint   [D] Saddle Joint

9. **Out of twelve pairs of ribs, how many pairs are not joined to the breastbone.**
   [A] 2   [B] 3
   [C] 4   [D] 5

10. **Which of the following given natural process is an example of condensation process?**
    [A] Formation of rainbow
    [B] Formation of clouds
    [C] Blue colour of sea
    [D] Formation of salt from sea water

11. **Which of the following organisms has a backbone?**
    [A] Spider   [B] Starfish
    [C] Snake   [D] Snail

12. **Which is not correct?**
    [A] Sea weeds and sea water are sources of iodine.
    [B] Protein rich foods like meat, fish, poultry are good sources of phosphorus.
    [C] Cereal grains do not provide phosphorus.
    [D] Dried beans and egg contain appreciable amounts of phosphorus.

13. **The percentage of nitrogen in air is**
    [A] 21%   [B] 0.1%
    [C] 54%   [D] 78%

14. **Which of the following is included in our diet but it is neither a plant nor an animal product?**
    [A] Oil   [B] Milk
    [C] Salt   [D] Rice

15. **Which of the statement(s) is/are correct?**
    (i) The compressed air in a tyre exerts a force large enough to lift a heavy car.
    (ii) In a syringe, the plunger compresses the liquid.
    [A] Statement 2 is correct and statement 1 is incorrect.
    [B] Statement 1 is correct and statement 2 is incorrect.
    [C] Both statements 1 and 2 are correct.
    [D] Both statements 1 and 2 are incorrect.

16. **Iron filings can be separated from wood particles using**
    [A] Chain saw
    [B] Vacuum cleaner
    [C] Magnet
    [D] Filter paper

17. **The primary source of obtaining natural fibre**
    [A] Only plants
    [B] Only animals
    [C] Both plants and animals
    [D] Neither plant nor animal

18. **The number of types of joints in our body is**
    [A] 5   [B] 15
    [C] 7   [D] 12

19. **Light year is a measure of**
    [A] Time   [B] Distance
    [C] Light intensity [D] Force

20. **An Electrician uses rubber gloves while repairing an electric switch mainly to**
    [A] Keep the hands clean
    [B] Keep the hands dry
    [C] Protect from electric shock
    [D] Keep the hands warm

21. **Mountaineers carry oxygen cylinders with them because**
    [A] Oxygen is lower than required at high altitude
    [B] there is no oxygen on high mountains.
    [C] Oxygen helps keep warm
    [D] Oxygen at high altitude is not safe to breathe

22. **The poles of a bar magnet are located at the**
    [A] Two ends and middle [B] One of the ends
    [C] Two ends   [D] Only middle

23. **If a bar magnet is allowed to rotate freely it will come to rest pointing in**
    [A] North-South Direction
    [C] East-west direction
    [B] No particular direction
    [D] North-East direction

✄ ✄ ✄

1. Observe the image and find out which of the following is Earth.

[A] A　　　　　　　　[B] B
[C] C　　　　　　　　[D] D

2. Observe the image and find out which of the following is Sun.

[A] A　　　　　　　　[B] B
[C] C　　　　　　　　[D] D

3. When we observe the day sky, why are we not able to find different celestial bodies?
   [A] Because other celestial bodies disappear behind the earth.
   [B] Because they experience night.
   [C] Because of the bright light of the sun.
   [D] Because they are very small in size.

4. A teacher shows the model of the solar system to the students and point out at four planets, Mars, Saturn, Jupiter, Uranus. She asks Amita, which among these four planets is coldest. What should be Amita's reply?
   [A] Mars　　　　　　[B] Saturn
   [C] Jupiter　　　　　[D] Uranus

5. Imagine that Earth was located closer to the sun, than its present position. What change in the earth's condition is most likely to occur?
   [A] Earth will become unfit for life.
   [B] Earth will have a land to live.
   [C] Earth will have an uneven surface.
   [D] Earth will have no water

6. Which of the following is a star?

[A] Sun　　　　　　　[B] Satellite
[C] Moon　　　　　　[D] Planet

7. Observe the image and suggest why Earth is the only habitable planet in our solar system?

   [A] Because Earth is located at an adequate distance from the sun.
   [B] Because Earth is located far from the sun.
   [C] Because Earth is located near the sun.
   [D] Because Earth is protected by other planets from sun's rays.

8. Which of the following latitudes receive the maximum heat from the sun?
   [A] Equator　　　　　[B] Tropic of Cancer
   [C] North Pole　　　　[D] South Pole

9. Observe the image and read the location of the Point x.
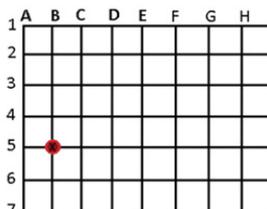
[A] 3F　　　　　　　　[B] 5B
[C] 2G　　　　　　　　[D] 5A

10. Suppose you have a plain white ball with a red dot marked on it. You need to tell the exact location of the dot. How can you do it?

[A] By drawing a grid on the ball.
[B] By measuring distance from the corners.
[C] By drawing a sides on the ball.
[D] By measuring distance from the center.

11. **Suppose 5 represents the equator in the given image. Then which of the following locations is closest to the equator?**
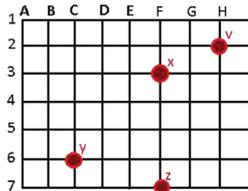
[A] v   [B] x
[C] y   [D] z

12. **Suppose you are traveling east of the prime meridian in a straight direction. What change you will observe in the latitude and longitude due to this movement?**
[A] Latitude will remain same but longitude will increase.
[B] Longitude will remain same but latitude will increase.
[C] Both latitude and longitude will increase.
[D] Both latitude and longitude will remain same.

13. **Observe the given image and tell which of the following locations experience the hottest climte.**
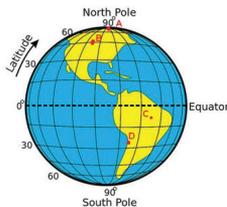
[A] A   [B] B
[C] C   [D] D

14. **Observe the image. Which of the following locations is closet to 40°N and 40°E.**
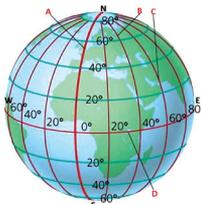
[A] A   [B] B
[C] C   [D] D

15. **In a dark room, a boy switched on a torch and pointed it towards a globe. He observed that only half portion of the globe, facing the torch is getting light, whereas the other half is in the dark.**
In this experiment, the line separating the illuminated side with the darker side will be called _____.

[A] Axis   [B] Equator
[C] Circle of Illumination [D] Orbit

16. **Suppose you are Raina, who lives in New Delhi. Also, it is 30th November morning and the sun has risen from the east.**
In this situation, what would be the position of the earth around the sun?
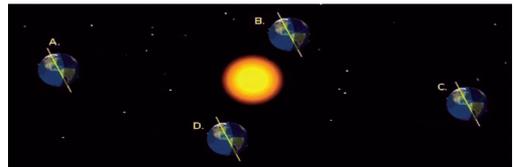
[A] A   [B] B
[C] C   [D] D

17. **The duration of day and night varies with the season. Which of the following methods can help test the duration of day and night on earth?**
[A] Calculate the number of hours between sunrise and moon rise; and then subtract it by 24 hours. The number of hours between sunrise and moon rise will be daytime and remaining hours will be night time.
[B] Calculate the number of hours between sunrise and moon set; and then subtract it by 24 hours. The number of hours between sunrise and moon set will be daytime and remaining hours will be night time.
[C] Calculate the number of hours between sunrise and sunset; and then subtract it by 24 hours. The number of hours between sunrise and sunset will be daytime and remaining hours will be night time.

[D] Calculate the number of hours between moon rise and moon set; and then subtract it by 24 hours.

The number of hours between moon rise and moon set will be daytime and remaining hours will be night time.

18. **You are aware that Uranus's axis is tilted at about 98º. Assume that earth's axis is tilted at the same angle and create a model of the 'revolution and seasons'. Remember that only the tilt of the earth's axis as increased and other factors remain the same. Which of the following images is closest to the assumption?**

[A]

[B]

[C]

[D]
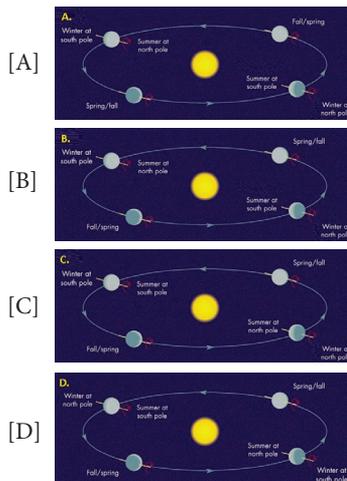
19. **Which of the following maps has the largest scale?**

[A]

[B]

Asia

[C]

[D]

20. **Suppose you need to make a chart of the solar system. Which of the following celestial objects you will not show as a planet?**
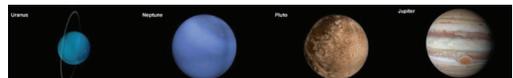
[A] Uranus [B] Neptune
[C] Pluto   [D] Jupiter

21. **Teacher asked students in class, which of the following planets has water? What would be the correct response?**
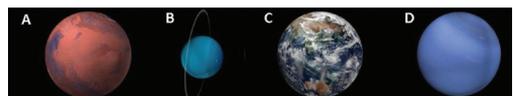
[A] A [B] B
[C] C [D] D

22. **Teacher asked students in class, which of the following planet is closest to the sun? What would be the correct response?**

[A] A [B] B
[C] C [D] D

23. Teacher asked students in class, which of the following planet is closest to earth? What would be the correct response?

[A] A   [B] B
[C] C   [D] D

24. Teacher asked students in class, which of the following planet has a rocky surface? What would be the correct response?
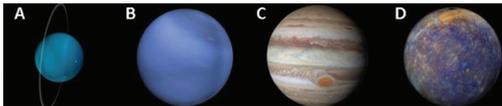
[A] A   [B] B
[C] C   [D] D

25. Observe the image and find out which of the planet is wrong in sequence.
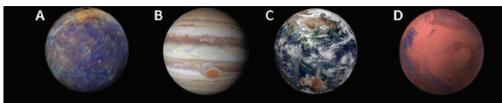
[A] A   [B] B
[C] C   [D] D

26. Observe the image and find out which of the planet is wrong in sequence.
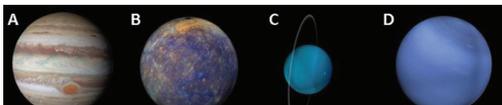
[A] A   [B] B
[C] C   [D] D

27. Suppose you need to make a model of the solar system. Which of the following celestial objects you will not show as planet?

[A] A   [B] B
[C] C   [D] D

28. Which of the following is a star?

[A] A   [B] B
[C] C   [D] D

29. Observe the image and find out which of the following planets is the smalllest in size.
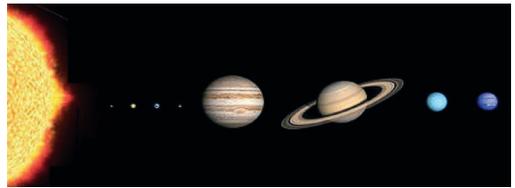
[A] Earth   [B] Jupiter
[C] Neptune   [D] Mercury

30. Observe the image and find out which of the following is not a planet.
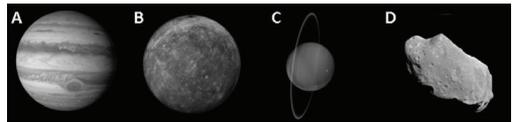
[A] A   [B] B
[C] C   [D] D

31. India is located at
[A] Northern hemisphere at the tropic of cancer
[B] Northern hemisphere at the tropic of capricorn
[C] Southern hemisphere at the tropic of cancer
[D] Southern hemisphere at the tropic of capricorn

32. India's population has crossed 100 crores mark around
[A] 2010   [B] 1990
[C] 2001   [D] 2015

33. The national animal of India is
[A] Tiger   [B] Lion
[C] Elephant   [D] Peacock

34. The number of countries that shares land boundaries with India is
[A] three   [B] none
[C] five   [D] seven

35. The number of states and union territories of India at present are
[A] 28 and 7   [B] 29 and 7
[C] 28 and 9   [D] 29 and 9

36. In high mountains, vegetation consist mainly of
[A] Coniferous trees
[B] Evergreen non-coniferous trees
[C] Non-coniferous Deciduous trees
[D] Normal evergreen trees

1. **What is the product of 4, 105 and 200?**
   [A] 840000   [B] 84000
   [C] 1220   [D] 309

2. **Which of the following equations show the commutative property of multiplication?**
   [A] $15 \times 0 = 0$
   [B] $2 \times (6 \times 5) = (2 \times 6) \times 5$
   [C] $10 \times 5 = 5 \times 10$
   [D] $10 \times (5 + 8) = (10 \times 5) + (10 \times 8)$

3. **Which value of x can make the given equation true?**
   $24 + (20 + x) = 24 + 55$
   [A] 35   [B] 25
   [C] 24   [D] 20

4. **Which number should be filled to balance the following?**
   $$\frac{3}{5} = \frac{27}{\underline{}}$$
   [A] 5   [B] 9
   [C] 14   [D] 45

5. **Which of these is correct comparison of the given fractions?**
   [A] $\frac{1}{4} < \frac{1}{6}$ [B] $\frac{2}{5} < \frac{2}{9}$
   [C] $\frac{4}{5} > \frac{4}{7}$ [D] $\frac{5}{8} > \frac{5}{6}$

6. **Neha has a box of 27 stamps. She gives one-third of them to her sister. How many stamps does Neha still have?**
   [A] 24   [B] 18
   [C] 12   [D] 9

7. **Abhishek bought $3\frac{1}{2}$ metres of fabric on Sunday and $5\frac{1}{2}$ metres of fabric on Monday. Find the total length of fabric, in metres, he bought.**
   [A] $9\frac{1}{2}$ [B] $8\frac{1}{2}$
   [C] 9   [D] 8

8. **Based on the information given below, find the maximum possible numbers.**
   • **The number must be smaller than half of 50.**
   • **The number must be divisible by both 2 and 4**
   [A] 12   [B] 10
   [C] 8   [D] 6

9. **The table below shows the heights of three students in a class.**

Boys	Height (in cm)
Aman	150
Adarsh	156
Akhil	162

   The height of another student Anand is more than the height of Adarsh but less than the height of Akhil. Which of these could be the height, in cm, of Anand?
   [A] 158   [B] 163
   [C] 155   [D] 156

10. **Which of these correctly arranges the given fractions in the ascending order?**
    $$\frac{1}{3}, \frac{3}{4}, \frac{5}{7}, \frac{7}{10}, \frac{8}{15}$$
    [A] $\frac{1}{3} < \frac{3}{4} < \frac{5}{7} < \frac{7}{10} < \frac{8}{15}$

    [B] $\frac{1}{3} < \frac{7}{10} < \frac{8}{15} < \frac{3}{4} < \frac{5}{7}$

    [C] $\frac{1}{3} < \frac{8}{15} < \frac{7}{10} < \frac{5}{7} < \frac{3}{4}$

    [D] $\frac{1}{3} < \frac{8}{15} < \frac{5}{7} < \frac{3}{4} < \frac{7}{10}$

11. Ram bought $9\frac{1}{2}$ liters of milk in the morning. He used $4\frac{1}{4}$ liters of milk for one recipe and $3\frac{1}{2}$ liters for the other one. How much milk, in liters, is left with him?

[A] $1\frac{3}{4}$

[B] $2\frac{2}{3}$

[C] $2\frac{1}{2}$

[D] $1\frac{1}{4}$

12. Four equivalent fractions for $\frac{4}{7}$ are

[A] $\frac{16}{28}, \frac{24}{42}, \frac{18}{35}, \frac{32}{56}$

[B] $\frac{8}{14}, \frac{12}{21}, \frac{20}{35}, \frac{28}{49}$

[C] $\frac{2}{3}, \frac{12}{21}, \frac{40}{70}, \frac{36}{63}$

[D] $\frac{7}{4}, \frac{4}{7}, \frac{24}{42}, \frac{36}{63}$

13. What is the equivalent fraction of $\frac{2}{9}$ with denominator 27?

[A] $\frac{2}{27}$

[B] $\frac{20}{27}$

[C] $\frac{5}{27}$

[D] $\frac{6}{27}$

14. A carpenter sawed off a piece having length $20\frac{1}{4}$ feet from a $32\frac{1}{8}$ feet long wooden board. What is the length, in feet, of the remaining piece of wooden board?

[A] $11\frac{7}{8}$

[B] $11\frac{8}{7}$

[C] $12\frac{1}{8}$

[D] $12\frac{1}{4}$

15. The pictograph shows the number of guavas a group of friends have.

Names	No. of Guavas
Manoj	🫒🫒🫒
Deepak	🫒🫒🫒
Rajan	🫒🫒🫒
Virat	🫒🫒

🫒 = 10 Guavas

How many guavas do they have altogether?

[A] 100

[B] 150

[C] 135

[D] 115

16. The additive inverse of -10 is equal to

[A] -10

[B] 10

[C] 0

[D] $\frac{1}{10}$

17. The statement $\frac{1}{(x-4)} = \frac{1}{x} - \frac{1}{4}$

[A] Is always true
[B] Not always true
[C] True for x=4
[D] True for x=1

18. $\frac{1}{(2x-4)}$ is undefined when

[A] X=4

[B] X=-4

[C] X=2

[D] X=0

19. Two parallel lines
[A] Will always intersect at only one point
[C] Will intersect at many points
[B] Will never intersect
[D] May intersect at one point

20. The slope of the line $2x + 2y = 2$ is equal to

[A] -1

[B] 2

[C] 4

[D] 1

21. The value of $\frac{n(n+3)}{2}$ when $n = 0$ is

[A] $= 3/2$

[B] $= 0$

[C] $= n/2$

[D] $= 3n/2$

22. $(8 \div 4) \div 2$ is equal to

[A] 4

[B] 1

[C] 2

[D] 6

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SECTION D

DIGITAL LITERACY

1. You have a field in your data source called Sur Name. Which option should you choose to communicate to Mail Merge that "Sur Name" is the same thing as "LastName"?
   [A] Insert Merge Field   [B] Address Block
   [C] Greeting Line   [D] Match Fields

2. _____ is a valid type of data source in Mail Merge
   [A] Excel Spreadsheet
   [B] Text Files
   [C] Databases such as Microsoft SQL Server, ODBC, DSN
   [D] All of the these

3. Using WordArt, Poorna created a text "OCTAGON". She then created a shape filled in orange as shown below. If the text "OCTAGON" has to appear on the shape, what should Poorna do?
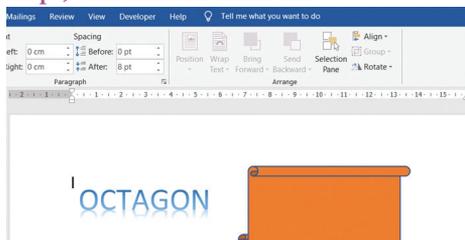
   [A] Select both the WordArt text and the shape and Right click select Group
   [B] Drag the Shape and place over the WordArt text and Select Bring To Front and then Bring Infront of Text
   [C] Drag the Shape and place over the WordArt text and Select Send to Back and then Send Behind Text
   [D] Select the Shape and Click on Layout Tab, Click on Wrap Text Button and Select Square option in that menu

4. In MS Word 2016, in which view Headers and Footers are visible?

   [A] Read Mode   [B] Web Layout View
   [C] Print Layout View   [D] Draft

5. Punitha created the given table in MS Word to show the list of her classmates selected in each sport to her teacher. Which of the following options did she use to create this table?.
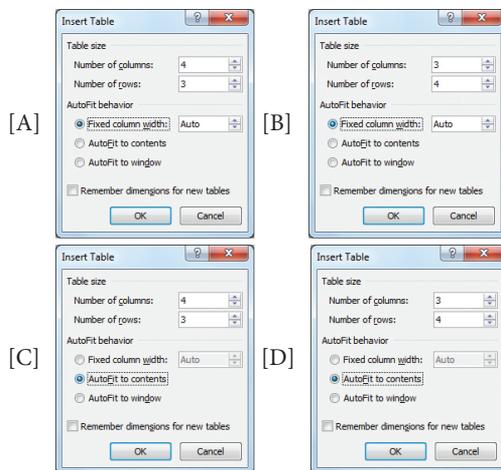
6. A new Excel Workbook contains _____ worksheets by default
   [A] 1   [B] 2
   [C] 3   [D] 4

7. Karthik was working on a task in a spreadsheet in MS Excel. His task was to calculate how long it takes when he finishes making an item of clothing to when he sells it. He used Fill Down feature from cell D3 to D5. Why did he use that feature?

⊿	A	B	C	D
1	**Karthik's Fancy Clothes**			
2	Item	Date Finished	Date Sold	Days Taken to Sell
3	Shirt	12-Jan-13	24-Jan-13	12
4	Pants	13-Feb-13	17-Feb-13	4
5	Coats	14-Feb-13	17-Feb-13	3

   [A] to fill Column D with the default fill color 'yellow'
   [B] to centre the data in Column D

[C] to copy the data in cell D3 into cells D4 and D5
[D] to copy the formula in cell D3 into cells D4 and D5.

8. **How would you refer to ALL the cells in row 6? How would you refer to ALL the cells in column B?**
   [A] R6 and CB
   [B] A6:ZZZ6 and B1:B2985
   [C] 6:6 and B:B
   [D] A6:Z6 and B1:B1000

9. **A Business Analyst wants to do some statistical calculations and prepare some tables and graphs. Which of the following softwares he will use?**
   [A] Adobe Photoshop [B] Excel
   [C] Powerpoint [D] CorelDraw

10. **Harshall created this spreadsheet to keep track of his pocket money. What formula could have been used in cell E11?**

	A	B	C	D	E
1					
2		Harshall's Pocket Money			
3					
4	Date	Description	Received	Spent	Balance
5	28-Jun	Pocket money	$30.00		$30.00
6	29-Jun	Movie ticket		$8.00	$22.00
7	30-Jun	Lunch		$5.00	$17.00
8	1-Jul	Lunch		$5.00	$12.00
9	4-Jul	Pocket money	$30.00		$42.00
10					
11	Balance		$60.00	$18.00	$42.00

   [A] =C11-D11 [B] =SUM(E5:E10)
   [C] C11-D11 [D] SUM(E5:E10)

11. **Raju typed numbers into the cells of Column B of his spreadsheet. The cells displayed "######" instead of numbers. What is the most possible reason for this?**
   [A] He typed characters instead of numbers into Column B
   [B] The Column B is not wide enough to display the numbers
   [C] Raju is using a non-English Keyboard
   [D] He typed the numbers and changed the formatting to Text instead of Number

12. **Which of the following statements about websites is false?**
   [A] The Internet and the website are the same thing
   [B] Search engines and web browsers are not the same
   [C] You view websites in a web browser
   [D] websites can be connected through hyperlinks

13. **_____is a web browser developed by Apple Inc.**

14. **In the web address: http//:kamp.nistads.res.in/pictures/dpsschool/ClassVI.jpg What does /dpsschool/ indicate?**
   [A] The name of the image on the website
   [B] It is the URL.
   [C] The folder on the website where ClassVI.jpg will be found.
   [D] The homepage image for the website

15. **Web addresses can be written as words or as numbers. For example: http://kamp.nistads.res.in might have an address number of 62.142.1.0. What are these numbers called?**
   [A] Internet Protocol Address
   [C] File Transfer Protocol Address
   [B] Uniform Resource Locator Number
   [D] ISP Number

16. **Identify the following based on the following features.**
   • **It is a piece of software.**
   • **It enhances another software application.**
   • **It usually cannot be run independently.**
   • **It sometimes modifies the interface.**
   • **It can also modify the behavior of web browsers.**
   [A] App [B] Plug in
   [C] Bot [D] All of these

17. **Pieces of information in computer terms are called**
   [A] Folder [B] Gigabyte
   [C] Data [D] Process

18. **Rajat wants to take a soft copy of his childhood photo. Which input device would be of use to him?**
   [A] Printer [B] Keyboard
   [C] Scanner [D] Trackball

19. **Which of the following is/are special Key/s?**
   [A] → [B] F3
   [C] Ctrl [D] All of these

20. **Which device converts the data or instructions given to a computer into electrical signals?**
   [A] Input Device [B] Output Device
   [C] Both A & B [D] Memory Device

21. **In which generation of computers has Apple developed Macintosh?**
   [A] Fourth [B] Second
   [C] Third [D] First

22. **Which generation of computers think like human beings?**
   [A] Fourth   [B] Second
   [C] Third   [D] First

23. **How many instructions per second can be executed by a computer?**
   [A] Two thousand million
   [B] One thousand million
   [C] One billion
   [D] Two billion

24. **Which of the following statement(s) is/are true?**
   Statement A: Super computers are the fastest computers.
   Statement B: Charles Babbage invented Analytical Engine
   [A] Statement A is correct
   [B] Statement B is correct
   [C] Statement A and B are correct
   [D] Neither statement A nor statement B is correct

25. **Mouse is a pointing device. They are of various types. Which one of the following is a type of mouse?**
   [A] Mechanical mouse   [B] Serial Mouse
   [C] Optical mouse   [D] All of these

26. **UNIVAC is an example of_____generation computer.**
   [A] First   [B] Second
   [C] Fourth   [D] None of these

27. **Which of the following statement is/are true about fourth generation computer?**
   [A] Fourth generation computers used microprocessor
   [B] These computers used the VLSI technology.
   [C] These computers used assembly language
   [D] Both A and B are true

28. **Multi-touch is a technology that enables touch screen devices to recognize touch gestures on multiple points on the surface of a device. Which among the following is a multi-touch gesture?**
   [A] Tap   [B] Slide
   [C] Pinch   [D] Swipe

29. **The image shown here is the logo of a/an _____.**

   [A] Search Engine

   [B] Display technology
   [C] Browser
   [D] Instant messenger

30. **_____ is the latest version of iOS and iPadOS, a mobile operating system developed by Apple Inc. for various devices.**
   [A] iOS 13.2.3   [B] iOS 13.3.3
   [C] iOS 13.2.4   [D] iOS 13.3.4

31. **Which one of the following is not correct for Digital Signature?**
   [A] It is a mechanism for authentication
   [B] It cannot be duplicated
   [C] It is created by encrypting information
   [D] It is the scanned image of one's signature

32. **A Spread Sheet allows to only**
   [A] Sort data
   [B] Arrange data
   [C] Calculate numerical values
   [D] All of these

33. **Word processing in computer terminology refers to**
   [A] Software development
   [B] Editing only text files without any image
   [C] Editing text files with images
   [D] Editing machine language

34. **The process of transferring files from a computer on the Internet to your computer is called–**
   [A] uploading   [B] Transfer
   [C] Email   [D] downloading

35. **MS Power point can be installed in**
   [A] Only laptops
   [B] Laptops and other computers
   [C] Only Desktops   [D] Only Mainframes

36. **The software application used for accessing sites or information on the internet is called**
   [A] Email   [B] Web browser
   [C] Firewall   [D] Operating System

37. **Animation with Power point is**
   [A] Not possible   [B] Possible
   [C] Requires additional software
   [D] Requires additional permission

38. **The first page of a website is called the**
   [A] Home Page   [B] First Page
   [C] Link Page   [D] Zero Page

1. How are the following related?
   Colosseum, Pasta, Leonardo da Vinci
   [A] No connection
   [B] All are related to Italy
   [C] The first two are work of art by Leonardo da Vinci
   [D] Leonardo da Vinci loved eating pasta that was served in the restaurant called Colosseum

2. Four girls are sitting on a sofa. Shikha is to the left of Reena, Manju is to the right of Reena. Rita is sitting between Reena and Manju. A photograph is taken of the girls. Who will be second from the left in the photograph?
   [A] Reena   [B] Shikha
   [C] Manju   [D] Rita

3. In the month of June, how many goods have a share of more than 25% of the total production?
   [A] One   [B] Three
   [C] Two   [D] Four

4. How many independent words can be made out of HEARTLESS without changing the order of the letters and using each letter only once?
   [A] 3   [B] 4
   [C] 5   [D] Cannot be divided

5. Spot the number of differences

   [A] 2   [B] 5
   [C] 6   [D] No difference

✷ ✷ ✷

HINTS & EXPLANATION

1. (A) A boy and a girl from same parents are brother and sister.
2. (B) Q should be a substance that is solid and insoluble in water i.e., chalk powder.
3. (C) A mixture of insoluble solid in liquid, i.e. sand and water can be separated by filtration.
4. (D) Coffee in hot water cannot be separated by decantation as coffee is soluble in hot water.
5. (A) Decantation is a process to separate mixtures by removing a liquid layer that is free of a precipitate
6. (C) Difference in weight, is utilizes in the process of winnowing for the separation of two solids.
7. (B) Snail has only one foot under its body. The foot of the snail is large, flat and disc-shaped, which is made of strong muscles. It is called muscular foot.
8. (A) Ball and socket joint involves two bones. One of the bone has a large rounded end which fits into a cup-like socket of the other bone.
9. (A) First seven pairs are attached directly to the sternum by costal cartilages and are called true ribs. The 8th, 9th, and 10th pairs—false ribs—do not join the sternum directly but are connected to the 7th rib by cartilage. The 11th and 12th pairs—floating ribs—are half the size of the others and do not reach to the front of the body.
10. (B) Formation of clouds is due to condensation of water vapours in the atmosphere.
11. (C) Snake has a backbone. The animals with backbone are called vertebrates
12. (C) Cereal grains provide phosphorus in good amount.
13. (D) 78% is percentage of nitrogen in air.
14. (C) We get salts from Sea Water.
15. (B) The compressed air in a tyre exerts a force large enough to lift a heavy car. (ii) In a syringe, the plunger does not compress the liquid. Pressure is applied on the liquid causing it to flow out.
16. (C) Among the options only magnet will act differentially on iron
17. (C) Fibres are created from both plant and animal material
18. (A) Ball and socket, Hinge, Gliding, Pivotal, Fixed
19. (B) One light year is the distance travelled by light in one year in vacuum
20. (C) Electrician uses rubber gloves while repairing an electric switch at your home because rubber gloves are insulators. This protects him from avoiding electric shocks.
21. (A) The level of oxygen decreases with altitude
22. (C) The two ends of a bar magnet are its poles
23. (A) The poles of a bar magnet align with the north and south pole of earth's magnetic poles

1. (D) Because of blue surface that represents water.
2. (A) Because it has its own heat and light.
3. (C) Because sun is so bright that other celestial bodies are not visible during daytime.
4. (D) Because Uranus is the farthest among these four planets.
5. (A) Because suitable distance from sun results in earth being neither too hot nor too cold.
6. (A) Because sun has its own heat and light.
7. (A) Because suitable distance from sun results in earth being neither too hot nor too cold.
8. (A) Because sun rays fall directly on the equator.
9. (B) Because lines 5 and B intersect at Point x.
10. (A) Because the intersection of lines help in locating a place.
11. (C) Because Point y is located closest to line 5.
12. (A) Because longitudes are arranged north and south.
13. (C) Because Point C is located closest to equator.
14. (C) Because Point C is located closest to 40°N and 40°E.

15. (B) Circle of Illumination is the line that separates areas experiencing daytime from nighttime on the globe.

16. (A) Because it is winter season in New Delhi and at position A, Northern Hemisphere is tilted away from the sun.

17. (C) Because the period between sunrise and sunset is the daytime.

18. (D) Since Uranus's axis is tilted at an angle of 98º, the planet rotates sideways. Due to this the seasons differ between north and south poles.

19. (D) Because Maharashtra map represents the smallest area among all other maps.

20. (C) Because Pluto is not a planet. It is a dwarf planet.

21. (C) Because it is Earth, the only known planet which has water.

22. (A) Because it is Mercury, which is closest to sun.

23. (B) Because it is Venus, closest to earth than Mercury, Neptune and Jupiter.

24. (D) Because only Mercury has a rocky surface. Uranus, Neptune and Jupiter has gaseous surface

25. (B) Because B is Jupiter.

26. (B) Because B is Mercury.

27. (B) Because B is moon.

28. (A) Because A is sun, which emits its own heat and light.

29. (D) Because Mercury is smallest in size than others.

30. (D) Because D is an asteroid.

31. (A)

32. (C) 2001 as per census

33. (A)

34. (D) There are seven countries that shares land boundaries with India they are- China, Nepal, Bhutan, Bangladesh, Myanmar, Afghanistan and Sri Lanka

35. (A) Following dissolution of Article 370, two more UTs were added

36. (A) With increase in height, the temperature falls. At a height between 1500 metres to 2500 metres, most of the trees are conical in shape.

SECTION-C
MATHEMATICS

1. (B) $(4 \times 105) \times 200 = 420 \times 200 = 84000$

2. (C) When two whole numbers are multiplied, the product remains the same even if their order is changed.
So, $10 \times 5 = 5 \times 10$ holds the commutative property for multiplication.

3. (A) $24 + (20 + x) = 24 + 55$
$24 + (20 + x) = 24 + (20 + 35)$
So, $x = 35$

4. (D) $\frac{3}{5} = \frac{3 \times 9}{5 \times 9} = \frac{27}{45}$
Hence, 45 is correct.

5. (C) In the fractions having the same numerator, the fraction with the smaller denominator is the greater fraction. So, the correct comparison is

6. (B) One-third of 27 = .
So, the number of stamps Neha still have = 27 – 9 = 18.

7. (C) $3\frac{1}{2} + 5\frac{1}{2} = \frac{7}{2} + \frac{11}{2} = \frac{7+11}{2} = \frac{18}{2} = 9$ metres.

8. (D) The possible numbers are 4, 8, 12, 16, 20 and 24. So, the maximum possible numbers are 6.

9. (A) It is given that the height of Anand is more than the height of Adarsh but less than the height of Akhil. Therefore, the height of Anand is more than 156 but less than 162.
Among the given heights, 158 is more than 156 but less than 162.
So, the height of Anand is 158 cm.
Hence, A is correct.

10. (C) 11. (A) 12. (B) 13. (D) 14. (A) 15.(C)

16. (C) In additive operation, the identity element is zero: 10+(-10) = 0

17. (B) A simple substitution with numbers will prove

18. (C) undefined when 2x - 4 = 0 , x = 2

19. (B) By definition, parallel lines never intersect

20. (A) Simple calculation for the slope

21. (B) Since n is multiplied, the whole expression is zero when n=0

22. (C) $(8 \div 4) \div 2 = 2/2 = 1$

SECTION-D
DIGITAL LITERACY

1. (D) Now that Word knows what type of merge you're running and where the details are coming from, it's time to map Word placeholders to Excel fields. To do so, click Match Fields in the Write & Insert Field groups. Word will match a few of the items for you. So Last Name : Sur Name

2. (D) The data sources of mail merge are Excel spreadsheets, text files, and access databases. Databases can be also MySQL, ODBC

3. (C) Shape should go back of the text in WordArt to make sure that it works as a transparent image letting the text be visible on the orange background

4. (C) Under View tab, we have the following Views: Read Mode, Web layout View, Print Layout View, Draft, Outline. Except Read Mode View, all the other views will have the Insert Tab. The insert tab has the Header and Footer group with the two button Header and Footer

5. (B) The table contains three columns and four rows. Each column is of equal width. So B is correct

6. (C) By default, a new workbook contains three worksheets

7. (D) Apart from copy and paste the formulas to below cells, in excel we can use the option FILL DOWN (Ctrl + D) as well. And here as the values are different in each cell, it is copying the fromulas and filling down and not data

8. (C) A6:XFD6 would also reference the entire 6th row. B1:B65536 would also reference the entire column B. However, 6:6 and B:B do the same thing and are easier to type and remember

9. (B) To make statistical calculations, we need to group data in the form of table. This data is then used to display as a graph or chart

10. (A) As it is showing the balance as 42 which is 60-18. It should be C11-D11. And as in excel to use formulas and get values, we need to use an equal sign as "=C11-D11"

11. (B) Microsoft Excel might show ##### in cells when a column isn't wide enough to show all of the cell contents. Formulas that return dates and times as negative values can also show as #####.

12. (A) The Internet is a global network of networks while the Website, also referred formally as World Wide Web (www) is collection of information which is accessed via the Internet.

13. (B) Apple safari is the web browser developed by Apple Inc.

14. (C) It is a folder on the website there classVI.jpg will be found

15. (A) An Internet Protocol address (IP address) is a numerical label assignee to each device (e.g., computer, printer) participating in a computer network that uses the Internet Protocol for communication.

16. (B) Example of Plug-in software is Adobe Flash player.

17. (C) Collection of information on a computer stored virtually is called DATA

18. (C) Scanner scans the document/image and stores as a soft copy in system.

19. (C) Keys which performs a specific function are called special keys. Ctrl

20. (A) Input Device converts the data or instructions given to a computer into electrical signals

21. (A) It was fourth generation of computers

22. (D) Fifth generation of computers think like humans.

23. (D) With every tick of the clock, the CPU fetches and executes one instruction. The clock speed is measured in cycles per second, and one cycle per second is known as 1 hertz. This means that a CPU with a clock speed of 2 gigahertz (GHz) can carry out two thousand million (or two billion) cycles per second.

24. (C) Both statements are true

25. (D) All of these are types of mouse.

26. (A)

27. (D)

28. (C) Pinch uses multi touch gesture

29. (D) This is a logo of instant messenger

30. (A) A is the latest version of IOS.

31. (D) A digital signature is a mathematical scheme for verifying the authenticity of digital messages or documents. It is a digital code (generated and authenticated by public key encryption) which is attached to an electronically transmitted document to verify its contents and the sender's identity.

32. (D) All the three are capabilities of a Spread Sheet

33. (C)

34. (D)

35. (B)

36. (B)

37. (B)

38. (A)

SECTION-E
LOGICAL REASONING

1. (B) Colosseum is in Rome, the capital city of Italy. Pasta is an Italian popular food item. Leonardo da Vinci was an Italian personality.

2. (D) The order of the girls is Shikha, Reena, Rita and Manju. In photograph the order will reverse.

3. (A) In the month of June the total production is (320+160+188+173+135) = 976
25% of total production = 25% of 976 = 244 units. Only goods A has 320 units of production which is greater than 244.

4. (A) LESS, HE, ART

5. (C)

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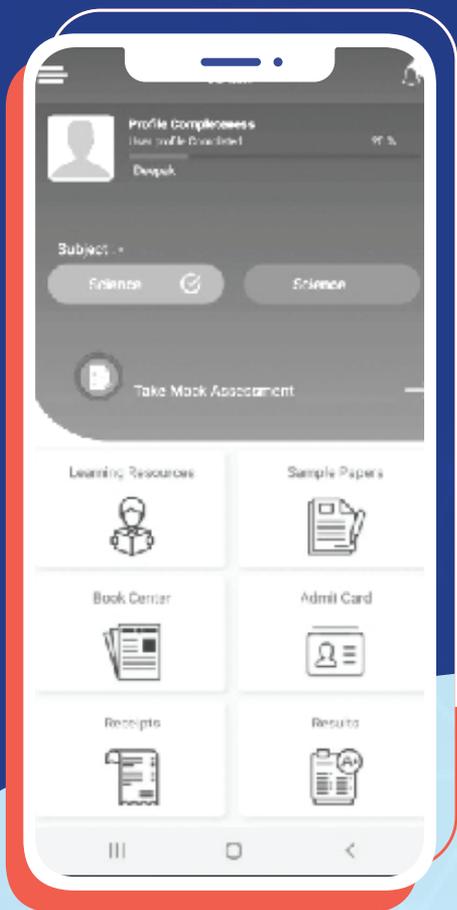
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